

Sonoma Home

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Planting trees for a hotter future

The Sonoma County Master Gardeners recommended 29 tree species to the city of Santa Rosa. The list included everything from the California buckeye (*Aesculus californica*) to the Chinese elm (*Ulmus parvifolia* 'Drake').

There are some species that are long lived — and may outlast you

By **MEG MCCONAHEY**
THE PRESS DEMOCRAT

Gazing out your window, have you ever wondered what your landscape will look like 50 years from now? Will your wisteria take over your house? Will the roses you happily purchased and lovingly tended survive another half-century to be someone else's heirloom roses?

There are some plants that are long lived and may well outlive you. But it's most likely to be your trees that will be there to shade the land long after you are gone. Maybe you are lucky to have an old oak, elm or mulberry tree providing cool cover in your yard. Aren't you glad someone thought to plant it or not pull the sapling long ago?

What you plant now will matter in the future.

Many plants that do OK in the Sonoma County climate now will struggle or not survive the rise in temperatures projected over the coming decades. And this is critically important when it comes to trees, given how long it takes to grow one to maturity, and all the environmental benefits trees provide, including absorbing carbon and providing oxygen.

Three years ago, with an eye to the second half of the 21st century, the city of Santa Rosa turned to the Sonoma County Master Gardeners to come up with a list of trees that will be resilient as average temperatures warm along the North Coast.

That list can help property owners looking to plant trees with a good selection of species or varieties that can withstand not only higher temperatures, but more extreme weather from droughts to

heavy rains brought on by atmospheric rivers.

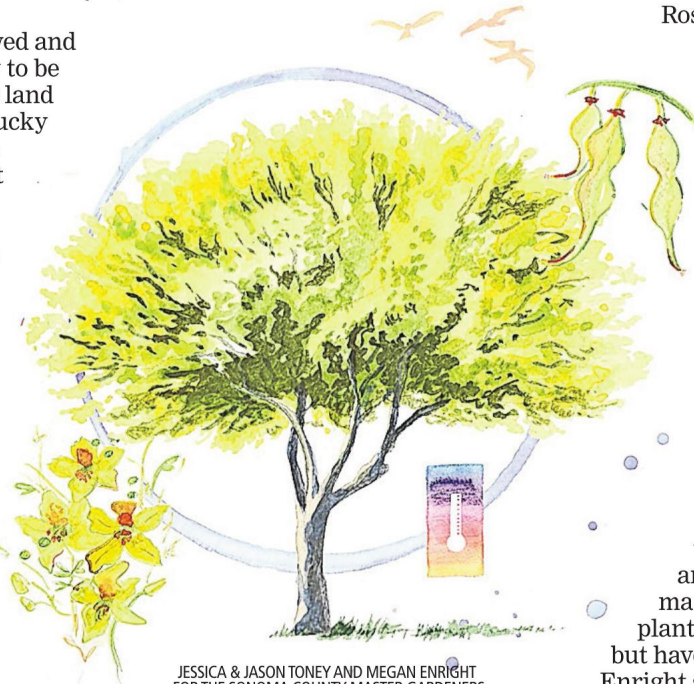
What became the Climate Forward Trees project was modeled after a UC Davis project called Climate Ready Trees.

The local master gardener team used state of California climate change projection tools (cal-adapt.org) to project the future climate for Santa Rosa. Then, they selected a city with a current climate that is similar to the projected climate of Santa Rosa in 2050. They settled on Paso Robles, an inland wine growing region in north San Luis Obispo County along the Central Coast.

Mimi Enright, who manages the Master Gardener program under the aegis of the University of California Cooperative Extension, pulled together a team of volunteers highly knowledgeable about plants to winnow the list from some 200 possibilities based on eight important criteria.

"Considering the range of selection criteria we used, it's a pretty bulletproof list," Enright said. "It does include options for native and non-natives and certainly habitat-friendly trees."

To see the consequences of poor tree planting one need only look around the urban inland areas of Sonoma County to the many redwood trees planted decades ago when they were tiny but have now grossly outgrown their yards. Enright said many redwoods suffered mightily during the prolonged drought because they need more moisture and fog, conditions found closer to the coast. The team selected trees not only for their ability to thrive under



JESSICA & JASON TONEY AND MEGAN ENRIGHT FOR THE SONOMA COUNTY MASTER GARDENERS

TURN TO TREES » PAGE D2

FRESH CUTTINGS

SANTA ROSA

Arbor Day tree planting party

While most of the country celebrates Arbor Day in April, California marks the day of trees around the time of Sonoma County horticulturist Luther Burbank's birthday.

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ADVICE TO GROW BY » SONOMA COUNTY MASTER GARDENERS

Breaking down climate zones to know where plants do best

Question: My husband bought a few plants at a nursery recently. There was a tag describing the USDA Climate Zone. I live in Sonoma 9a, but I saw other zones mentioned such as 9b and 10. There was also information about a Sunset Zone. What is the difference between them and how do I understand the tags?

Answer: For plants to thrive, understanding climate zone information is important. USDA data provides important information for your new selections. Sunset Climate Zone data is a bit more detailed, but either approach can help you determine what plants will do best in your local area.

USDA zone information uses average extreme minimum temperature data. If you live in an area that experiences frost each year, this informa-

tion will help you determine the best time to plant. On the USDA webpage, enter your ZIP code to receive current updates about your specific area. In November 2023 the USDA updated its information to more accurately reflect current weather trends. Better technology, including the use of additional weather stations, has enabled it to show a higher resolution of weather patterns. As a result, some areas were shifted into the next warmer half zone. When you purchase plants, double check the USDA website for your current location to verify the plant tag information is correct.

The USDA chart identifies thirteen different climate zones, with one being the coolest and thirteen



Helpful tags like these used by Prickett's Nursery give important information about climate zones where a plant will thrive.

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ADVICE

CONTINUED FROM D1

the warmest. Level one represents an extremely cold climate, such as Alaska's cold, mountainous regions. Very warm or hot locations, such as Hawaii or Puerto Rico, are represented in red. Each gradient indicates a 10 degree change in temperature. An "a" or "b" after a number indicates a 5 degree change in temperature. For example, in Sonoma county, 9a region is, on average, five degrees cooler than 9b.

Sunset Climate Zone information encompasses more details. Factors such as fog, elevation and proximity to large bodies of water, such as the Sonoma coast, are considered. Sonoma's Sunset Climate ranges from 14 - inland areas with some ocean influence - to 17 which encompasses areas close to the Pacific coast that may experience marine effects. This approach helps you determine, broadly speaking, the types of plants that will thrive in your particular area. Sonoma county is vast and covers areas from the coast, to valley regions and mountain tops. Find your location on the map and use the number shown on the map to determine the general growing information for your region.

Most gardening books, catalogs, seed packets and nurseries refer to plant hardiness zones, climate zones or growing zones. When you go to a nursery, don't throw away the plant tag. It has a lot of useful information about plant care including the USDA or Sunset zone information. If you are growing annual flowers and vegetables, USDA hardiness zones are only relevant to determine first and last average frost dates which will roughly

ADDITIONAL READING

- Sonoma Microclimates:** bit.ly/3lfg9gy
- Last average frost date for Sonoma County:** bit.ly/3P043f4
- NOAA Interactive frost date map:** bit.ly/3P5HfdR
- USDA Plant Hardiness Zone Map:** bit.ly/3Tk7eRy
- Sunset Climate Zone for Northern California:** bit.ly/30XH9F6

indicate the length of your growing season. Determining city or town boundaries for the Sunset Climate Zones is a bit more complex due to the numerous microclimates within each zone. More important is to consider the description in each Sunset zone and consider the microclimate where you live.

Of course, no zoning or mapping system is perfect. The microclimate in your garden will impact how your plants grow. However, the USDA hardiness map and Sunset Climates Zone information provide useful guidelines to help you decide when to plant and which varieties have enough time to mature in your garden.

Contributors to this week's column were Fay Mark, Patricia Rosales and Rob Williams. The UC Master Gardener Program of Sonoma County <https://sonomamgucanr.edu>, provides environmentally sustainable, science-based horticultural information to Sonoma County home gardeners. Send your gardening questions to scmgpd@gmail.com. You will receive answers to your questions either in this newspaper or from our Information Desk. You can contact the Information Desk directly at 707565-2608 or mgsonoma@ucanr.edu.



Coastal live oaks are good trees to plant now on larger properties because they will withstand warming temperatures on the North Coast.

TREES

CONTINUED FROM D1

warmer temperatures and bounce back during periodic droughts, but that were low maintenance, didn't produce a lot of messy debris that would have to be cleaned up, were resistant to pests and provide habitat for wildlife.

They leaned toward California natives but didn't stick to that strictly. Some are trees from Mediterranean climates like California.

They reached out to the city of Paso Robles and fellow Master Gardeners in that region for recommended trees that grow well in their current climate.

Scores of trees were evaluated under the eight criteria before settling on 29 ultimately provided to the city of Santa Rosa, Enright said.

The list included everything from the California buckeye (Aesculus californica) to the Chinese elm (Ulmus parvifolia 'Drake').

"We're going to have a lot of sickly, dead or dying trees in 50 years if we don't start working on this now," said Tim Coyne, a longtime master gardener with a degree in plant science from UC Riverside. "We wanted to get started early gaining an understanding of what it will look like 50 years out and start planting based on that projection."

Coyne said average temperatures in Sonoma County are projected to rise four to five degrees both high and low between now and 2050, enough to stress many species not adapted to California's hot,



JESSICA & JASON TONEY AND MEGAN ENRIGHT FOR THE SONOMA COUNTY MASTER GARDENERS

5 CLIMATE-FORWARD TREES FOR SONOMA COUNTY LANDSCAPES

Aesculus californica, California buckeye: A native tree that has interest year round, with scented panicles of white flowers in the spring. It can drop its leaves during our summer dry period if it's not irrigated but has nice branch structure and architectural interest even without its leaves.

Cercis occidentalis, Western redbud: A native tree with striking magenta pink blooms in spring. It has charming heart-shaped leaves and is a good option for a smaller garden.

Chilopsis linearis, Desert willow: Another great option for small gardens, Desert willow has great tubular flowers with bright pink or purple color.

Diospyros kaki, Persimmon or Punica granatum Persimmon: Two low-water use fruit tree options that are appropriate for smaller yards. These both have beautiful fall leaf color.

Parkinsonia microphylla, Little leaf palo verde: Another good option for smaller gardens, it has a stunning spring/summer yellow bloom. It may be a little harder to find in local nurseries but they may be able to order it for you.

Quercus agrifolia, Coast live oak: For larger lots and properties, this native oak is a keystone species and "food factories" for animals and insects.

Information and recommended Climate Forward Trees by the Sonoma County Master Gardeners: sonomamgucanr.edu/Recommended_Plants_for_Sonoma_County/Climate_Forward_Trees

City of Santa Rosa's Climate Ready Tree List: srcity.org/DocumentCenter/View/35364/Climate-Ready-Tree-List

summer dry climate and years of drought.

The Master Gardeners have adapted for themselves a slightly larger list than the one used by the

city of Santa Rosa, Enright said.

The city did not want to include oak trees for instance, because of their size. Most would grow out too large for the average tract home lot.

But the Master Gardeners represent all of Sonoma County, where many people live in semi rural and rural areas with more room for a mature oak.

Most of the trees on the city's list are suitable for small yards on city lots,

such as the strawberry tree (Arbutus unedo) which produces small edible fruit year-round.

But there are a few suggestions for medium-size trees like the Chinese pistache (Pistacia chinensis 'Keith Davey') and the large Chinese elm Chinese elm (Ulmus parvifolia 'Drake') for bigger spaces that grows up to 60 feet.

"Trees that aren't well matched against the increase in temperatures we expect to see will not be thriving," Enright said. "And trees provide a really critical range of ecosystem services for us in our homes. The energy conservation we get from the shade of well placed trees around our homes, habitat support for wildlife and biodiversity."

Any of the trees on the lists would be fine planted virtually anywhere in Sonoma County.

But Enright said the Master Gardeners are talking with Sonoma Water about the possibility of expanding and refining the list to offer trees more adapted to specific climate zones found in the county, from the cooler coastal areas to the hot inland areas like Cloverdale and the Sonoma Valley.

Being smart about what trees to plant goes beyond a concern for the future. From a practical standpoint, the right tree in the right place on your property is a good investment.

"Trees provide really critical functions and they're one of the most expensive, highly valued assets we put in our gardens," Enright said.

"The cost of replacing annuals in a four inch pot is pretty trivial. But we usually invest a lot more in the trees we put in our garden. A tree has a higher value for a homeowner so we want to make sure we're making the best investment in something that is going to thrive in the future."

You can reach Staff Writer Meg McConahey at 707-521-5204 or meg.mcconahay@pressdemocrat.com.

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What to watch SATURDAY

March 9, 2024
All times Pacific. Start times can vary based on cable/satellite provider. Confirm times on your on-screen guide.

Formula 1 Racing: STC Saudi Arabia Grand Prix ESPN2, 8:55 a.m. Live

Sergio Perez, George Russell, Lewis Hamilton, Charles Leclerc and three-time F1 drivers' champion Max Verstappen battle for 50 laps around Jeddah Corniche Circuit's 27-turn street course.

NBA Basketball: Boston at Phoenix ABC, 5:30 p.m. Live

Saturday NBA action has a primetime game on ABC featuring the Boston Celtics at the Phoenix Suns.

Hunting Housewives Lifetime, 8 p.m. Original Film

Four housewives — Karla Dodds (Denise Richards), Rebel Carron-Whitman (NeNe Leakes), Joli Symons (Kym Johnson Herjavec) and Sharell Bouvier (Melissa Ford) — head for a much-needed spa-retreat weekend when they find themselves downed in a plane crash. With no knowledge of basic survival, the housewives must use their wits and whatever is in their designer bags to try to



survive in the rugged wilds.

Svengoolie Classic Horror & Sci-Fi Movie: '13 Ghosts' MeTV, 8 p.m.

Sven introduces 13 Ghosts (1960), one of producer/director William Castle's famous gimmicky horror films (it was originally released in theaters using a process Castle dubbed "Illusion-O" that allowed audiences wearing special glasses to see enhanced images of the movie's ghostly scenes). While you can't enjoy Illusion-O during Sven's broadcast, the film is still fun, as it tells the tale of a family that inherits a haunted house and is able to see their ghostly tormentors with special goggles.

Saturday Night Live NBC, 8:30 p.m. Live; also livestreams on Peacock

Actor Josh Brolin, co-star of *Dune: Part Two*, which is now in theaters, returns for his third time as host. He is joined by Ariana Grande, who is making her third appearance as musical guest a day after dropping her latest album, *Eternal Sunshine*.

MOVIES YOU'LL LOVE



Beware the Night Nurse (2023, Suspense) Vitoria Setta, Bryce Jones LMN, 6 p.m.

Hearts in the Game (2023, Romance-comedy) Erin Cahill, Marco Grazzini Hallmark, 6 p.m.

Trolls World Tour (2020, Children) Anna Kendrick, Justin Timberlake Nick, 6 p.m.

Caddyshack (1980, Comedy) Chevy Chase, Rodney Dangerfield Sundance, 6:30 p.m.

Ghostbusters II (1989, Comedy) Bill Murray, Dan Aykroyd AMC, 7:30 p.m.

Come Fly With Me (2023, Romance-comedy) Heather Hemmens, Niall Matter Hallmark, 8 p.m.

Nanny Dearest (2023, Suspense) Kayleigh Anne Ruller, Liz Fenning LMN, 8 p.m.

The Thundermans Return (2024, Family) Kira Kosarin, Jack Griffo Nick, 8 p.m.

Double Jeopardy (1999, Suspense) Tommy Lee Jones, Ashley Judd CMT, 8:30 p.m.

The Last Samurai (2003, Adventure) Tom Cruise, Ken Watanabe IFC, 9:30 p.m.

From the editors of TV Weekly and tvinsider.com

CATCH A CLASSIC

31 Days of Oscar 2024: Best Picture

TCM, beginning at 4:30 a.m.

Turner Classic Movies' 31 Days of Oscar event continues this morning and into the early evening with a lineup featuring films that won or were nominated for Best Picture: **The Champ** (pictured) (1931, nominee), **Top Hat** (1935, nominee), **The Maltese Falcon** (1941, nominee), **The Last Emperor** (1987, winner) and **Lawrence of Arabia** (1962, winner). Starting in primetime and going into Sunday morning are films that won Best Picture: **Ben-Hur** (1959), **The Best Years of Our Lives** (1946), **Mutiny on the Bounty** (1935) and **Cimarron** (1931).

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